6296 wZ og 1913/14

FEB sil ion .

Bulletin of the University of Georgia

MARCH, 1913

GRADUATE SCHOOL



COURSES OFFERED, 1913-1914

UNIVERSITY OF ILLINOIS

AUG 23 1915

Entered at the Post Office Control Second-Class Matter, August 30th, 1905, under Act of Congress of July 16th, 1904.

Vol. XIII.

Serial No. 203

No. 7a



THE GRADUATE SCHOOL

HISTORICAL.

Although the first statutes of the University contemplated resident graduate students,* it was the custom here (as it was elsewhere, and indeed still is in some universities,) to confer the degree of Master of Arts upon any Bachelor of Arts of good character who. three years or more after graduation, should formally apply for the degree, and pay a fee therefor.** In 1868 a course of study was laid down which candidates for the Master's degree were to pursue. From 1869 until 1890 the regulations required the candidate successfully to complete the most advanced course in each of the academic (non-professional) schools. In 1892 the requirements for the degrees became what they have since substantially remained; slight modifications have been made from time to time.

In the Catalogue of 1872-73 the degree of Civil Engineer is advertised for the first time as a graduate degree, being based on the degree of Bachelor of Engineering. The degree of Civil and Mining Engineer was a still higher degree, based on both B.E. and C.E.

The degree of Master of Science was first offered in 1890, and M. S. in Agriculture in 1910.***

The graduate work of the University has been supervised by the Faculty, chiefly through its Committee on Graduate Courses. 1910 the work was set apart by the Board of Trustees as the Graduate School, with its own Dean.

ADMISSION.

Admission to the Graduate School is granted to graduates of colleges of good standing. Other persons of suitable age and attainments may also be admitted by special permission of the Committee on Graduate Courses. Admission to the Graduate School does not imply admission to candidacy for a degree. Application for admission should be made by correspondence or at the office of the Dean.

Should a student desire to take a graduate course for which his undergraduate work has not afforded sufficient preparation, he will be required to pursue the requisite studies.

^{*&}quot;Masters and Bachelors of Arts, who shall signify to the President their purpose of residing at the College or in Athens with a view of pursuing literature, under his direction, and under the government of the College, and give a sufficient bond to the Board of Trustees for the payment of their quarter bills, shall be considered as resident Graduates and students of the College." Laws of the College of Georgia, 1803, Chap. II, Sec. IV. So also Code of Laws for the government of Franklin College, 1816, Chap. II, Sec. XVI.

**Code of 1803, Chap. XII, Secs. II and IV. Code of 1816, Chap. II, Sec. XVI. TVI, and Chap. VIII, Secs. II and IV.

**The degree of Master of Agriculture had been offered from 1876 to 1879.

DEGREES.

The degrees conferred in the Graduate School are Master of Arts, Master of Science, Civil Engineer, Master of Science in Agriculture.

Candidates must have received a baccalaureate degree from this or some other institution of reputable standing, and must pursue here and complete satisfactorily a major and two minor courses.

The programme of study must form a consistent plan of work with some definite aim; it must not include any course that forms a part of the candidate's programme of study or of his curriculum for any other degree conferred or to be conferred here; it should be submitted early in the session (not later than November 1st,) to the Dean of the Graduate School, and must receive the approval of the Committee on Graduate Courses and of the Faculty.

In case a thesis or essay is required in connection with a graduate course, the assignment must be made to the candidate and reported to the Dean of the Graduate School not later than January 1st. The thesis must be handed to the professor not later than May 1st, and, if approved by him and by the Faculty, a bound copy must be deposited in the Library before the second Wednesday in June.

After the professors under whom the candidate has pursued an approved programme of study have reported in writing to the Dean that he has satisfactorily pursued the required courses and has passed written examinations upon them, he will be orally examined by a committee of the Faculty. Reports of written examinations must be made not later than two weeks before Commencement Sunday. In making reports the professor will transmit a copy of the written examination (questions and candidate's papers) for the use of the examining committee of the Faculty. This committee is appointed by the Chancellor and consists of not less than seven members of the Faculty. All other members of the Faculty are invited to attend the examination.

Master of Arts. Prerequisite degree: Bachelor of Arts or Bachelor of Science. The major course and at least one minor must be selected from the following departments of study: Philosophy, Education, History, Political Science, Rhetoric, English Literature, the English Language, German, Latin, Greek, Romance Languages, Mathematics.

Master of Science. Prerequisite degree: Bachelor of Science or Bachelor of Arts. The major course and at least one minor must be selected from the following departments of study: Mathematics, Chemistry, Geology, Physics, Astronomy, Physiology, Zoölogy, Botany.

Civil Engineer. Prerequisite degree: Bachelor of Science in Civil Engineering or Bachelor of Science in Electrical Engineering. The

major course must be in the department of Civil Engineering and the minors may be from minor graduate courses, or certain undergraduate courses, offered in other departments of the University. The choice of minors is subject to the approval of the Professor of Civil Engineering.

Master of Science in Agriculture. A reputable baccalaureate degree prerequisite. The major and at least one minor must be selected from courses offered in the College of Agriculture. One minor may be chosen from graduate courses offered in other departments of the University or from certain undergraduate courses. The choice of courses is subject to the approval of the professor in charge of the department in which the major course is selected.

COURSES, 1913-1914.

Explanation. Courses of instruction are classed as majors or minors according to the estimated amount of work required, and to some extent according to the nature of the subject. A major course will require half of the work of a candidate for the Master's degree in residence for one year. A minor course will require a quarter of his time. A major course is based upon and presupposes the Senior or most advanced undergraduate course of a Department. A minor course generally demands similar prerequisites, but extensions of certain advanced undergraduate courses may also be rated as minor graduate courses. A candidate for a degree will not be permitted, as a rule, to offer more than one minor that is not based upon the most advanced undergraduate course of a Department. All courses are submitted for approval and rating to the Committee on Graduate Courses, and are finally passed upon by the Faculty.

GREEK.

- a. Selections from Homer, Herodotus, the dramatists, Thucydides, Plato, and Demosthenes.
- b. Brief introduction to Historical Grammar. Classical Greek Syntax: Gildersleeve, and other works. Oral and written exercises in Attic Greek. Recitation of the more familiar metres. Readings in the History of Greece.

Three Lectures per week. Major. Professor Bocock and Adjunct Professor McWhorter.

LATIN.

1. A major course, designed to supplement the undergraduate courses, and therefore somewhat general in nature. It comprises the reading of considerable portions of Catullus, Lucretius, Juvenal, Seneca, and the Younger Pliny, with readings in Dill, Mommsen, and Ferrero; a review of grammar, from the comparative and historical point of view; exercises in Latin writing; reading in the

history of the literature, and an introduction to epigraphy and palaeography. Four hours per week. *Professor Hooper* and *Adjunct Professor McWhorter*.

2. A minor course in the Roman drama, consisting of lectures on the subject, and reading of a number of representative plays of Plautus, Terence, and Seneca. Especial attention is paid to the relationship of the Roman drama to the Greek drama, on the one hand, and the English drama on the other. Two hours per week. *Professor Hooper*.

GERMAN.

The German Classics. Selections from the following: Goethe: Werther, Faust I, Poems, Egmont, Iphigenie, Wilhelm Meister. Schiller: Kabale und Liebe, Fiesco, Don Carlos, Jungfrau von Orleans, Wallenstein, Wilhelm Tell, Poems. Lessing: Emilia Galotti, Minna von Barnhelm, Nathan der Weise, Hamburgische Dramaturgie, Laocoon, Controversial Writings.

Commentaries: Dünzer, Hettner, Braun, Bulthaupt, Fischer.

- 1. Major. About eleven hundred pages of German. Four conferences weekly.
- 2. Minor. About seven hundred pages of German. Two conferences weekly. Professor Morris.

FRENCH.

Le Roman en France dans la deuxième partie du XIXme Siècle.

Lectures in French. Reading of works by Flaubert, Feuillet, Cherbuliez, Fromentin, les de Goncourt, Daudet, Loti, Zola, de Maupassant, Bourget, Rod, Margueritte, Rosny, Prévot, Barrés, France, Fabre, Theuriet, etc.

Two hours per week. Minor. Professor Lustrat.

ENGLISH LITERATURE.

The English Drama. a. The Early English Religious Drama, some of the Morality Plays, and a sufficient number of the early tragedies and comedies to give a clear insight into the development of the drama.

- b. Selected plays of Shakespeare studied with reference to their sources, technique, and literary qualities.
- c. History of the Elizabethan Period: manners and customs, politics, education, etc. (Traill, Collier, Courthope, Green, Taine, Symonds, and others).
- d. Selected plays of Jonson, Beaumont and Fletcher, Middleton, Ford, Day, Decker, Webster, and Shirley, studied in comparison with those of Shakespeare.
- e. A short study of the Restoration Drama as represented by Dryden, Wycherly, Congreve, Addison.
 - f. Selected modern plays. Comparison with the earlier drama.

Text books: Ward's English Drama; Miss Woodbridge's Technique of the Drama; Manley's Specimens of Early English Plays. Collateral reading will also be assigned.

- 1. a. to f. inclusive. Four hours per week. Major. Professor Park.
- 2. a., and less extensive work in b. to f. inclusive. Two hours per week. Minor. Professor Park.

HISTORY.

- 1. The English Constitution to the Reign of Henry VII. A course comprising a thorough study of the foundations of Anglo-Saxon institutions, and their development through the mediaeval. It is based upon Stubbs's Constitutional History of England, and is rated as a minor. Three hours a week, first half year. Professor McPherson, Associate Professors Payne, and Brooks.
- 2. The English Constitution since the Reign of Henry VII. A course based upon the constitutional histories of Hallam and May, and covering the later phases of the development of English institutions. Three hours a week, second half year. Rated as a minor. Professor McPherson, Associate Professors Payne, and Brooks.

Courses 1 and 2 are together rated as a major. Each includes parallel reading, tested by frequent examinations. When taken as a major, a dissertation involving original investigation must be presented and approved before the candidate is admitted to final examination.

3. History of Georgia. A course in methodology. The student will receive training in the use of original sources, and will be required to familiarize himself with all the primary and secondary sources of the history of the State. Three hours per week. Rated as a minor. Associate Professor Brooks.

ECONOMICS.

Public Finance. Conferences will be held (a) for the discussion of sources and methods of investigation in Economics as applied particularly to the subject in hand, and (b) for the presentation and discussion of reports of students on the results of their investigations.

Publications of the U. S. Treasury and some of the other Departments; of the Census Bureau; letters from the Secretary of the Treasury transmitting estimates of appropriations; report of Industrial Commission; publications of state treasurers and tax commissioners; statutes of the U. S., and of the States; Proceedings of National Tax Association; Columbia University Studies in History, Economics, and Public Law; T. M. Cooley, Treatise on the Law of Taxation; various monographs.

Prerequisite: Economics 5, or its equivalent.

1. As a major the work will consist of an investigation of (a) the public expenditures of the States of the Union, or (b) the public revenues of the States. The student will present a final report based as far as possible on primary sources.

Four hours per week. Professor Curtis.

2. As a minor the work will consist of an investigation of some one phase of taxation, or tax administration.

Two hours per week. Professor Curtis.

PHILOSOPHY.

1. Systematic Psychology (Psychology 7). An advanced course in systematic and experimental psychology intended as a detailed study of theoretical discussions and original investigations regarding a single special topic, such as Sensations, Feelings, Attention, Association, Memory, etc., and as an introduction to the use of quantitative methods applicable to this topic. Parallel reading of one general systematic treatise by one of the following authors: Wundt, Ebbinghaus, James, Titchener, Münsterberg, or Ladd, will be required as a general basis of the work.

Prerequisites: Philosophy 1-2 and 6.

Two conferences and four hours experimental work weekly. Major. Professor Geissler.

2. Systematic Psychology. Identical with Course 1 except that the experimental work is less extensive.

One conference and two hours laboratory work weekly. Minor. Professor Geissler.

3. Applied Psychology (Psychology 11). As a rule this course will refer mainly to teaching. Texts: Münsterberg's Psychology and the Teacher; Kirkpatrick, Genetic Psychology; Thorndike, Educational Psychology; Whipple, Manual of Mental and Physical Tests. Comparative Psychology: Washburn, The Animal Mind; Yerkes, Animal Behavior; Thorndike, Animal Intelligence. Abnormal Psychology: Störring, Mental Pathology; Ribot, Diseases of Personality.

Prerequisites: Philosophy 1-2 and 6.

Two conferences a week. Minor. Professor Geissler.

4. An extension of the Senior Course in Philosophy. (a) History of Philosophy, based mainly on Rogers's Student's History of Philosophy. (b) A study of the social mind, based on Ross's Social Psychology. (c) A study of Ethics, based mainly on the text of Dewey and Tufts.

Four hours a week. Minor. Professor Woofter.

MATHEMATICS.

Of the following courses the requirement for a major will be two lectures per week in each of any three, together with an original paper covering an investigation of some related topic to be assigned by the department.

- 1. Differential Equations. An elementary course in Ordinary and Partial Differential Equations, with especial reference to methods of solution of equations most frequently occurring in the physical sciences.
- 2. Vector Analysis. A course of lectures in which a system of coördinates is presented and their advantages in certain classes of problems illustrated.
- 3. Projective Geometry. A course in Synthetic Geometry, based upon Holgate's translation of Reye, with reference to Cremona and Enriques.
- 4. Theoretical Mechanics. An analytical treatment of certain questions in Statics and Dynamics with the aid of the Calculus. A large number of problems illustrating the principles will be given. Professor Stephens and Adjunct Professor Pond.

PHYSICS.

- a. Physics 6 as given to the Senior Class; consisting of three hours per week of lectures on Theoretical Physics, as follows: First term, the Wave Theory of Light, using Edsen's "Light for Students" as a text. Second term: the Propagation of Electro-magnetic Waves, using Fleming's "Principles of Electric Wave Telegraphy" as a reference book. Third term: the Discharge of Electricity through Gases, Radioactivity, and the Electron Theory, using McClung's "Discharge of Electricity through Gases," and Campbell's "Modern Electrical Theory" as reference books.
- b. Individual laboratory work requiring approximately four hours per week; to be devoted to a series of experiments designed to illustrate and verify conclusions reached in the theoretical discussions of Physics 6. In this work the student will be largely left to this own resources to work out the details of the method to be adopted in the solution of the experimental problems which will be assigned.

Minor for a candidate for the degree of C. E. Professor Hendren.

CHEMISTRY.

Opportunity is offered to a limited number of qualified students to pursue advanced work in chemistry. The minimum qualification is satisfactory completion of undergraduate courses 2 and 8 in the department of Chemistry, or their equivalent. The nature of the advanced work will be determined by individual conference.

The following courses were given in 1912-13:

a. Analytical Chemistry. Quantitative Analysis. Twenty-four hours per week of laboratory work throughout the year, with frequent conferences.

This course consists of a critical and comparative study of quantitative methods. Although skill in manipulation is, of course, required, stress is laid upon mastering the chemical principles involved in Analytical Chemistry, rather than proficiency in mechanical methods.

Rated as a major. Professor White and Associate Professor Black.

b. Analytical Chemistry. Qualitative and Quantitative. Twelve hours per week of laboratory work throughout the year, with frequent conferences.

The work of this course is based upon and is an extension of undergraduate courses 8 and 9, practice and proficiency being required and the scientific principles underlying Analytical Chemistry mastered.

Rated as a minor. Professor White and Associate Professor Black.

BIOLOGY.

- 1. Animal Physiology. This course is an extension of undergraduate course (7), the extension consisting of two extra hours of laboratory work weekly, and considerable parallel reading, partly in more advanced texts, and partly in periodical literature, following a detailed syllabus giving a time allowance to the different subjects. This course is designed especially for those who are preparing to teach physiology in High Schools. It is rated as a Graduate Minor, and may be undertaken by any student who has completed undergraduate courses (1), (2), and (3). It will not be given to less than two students. *Professor Campbell*.
- 2. Vertebrate Comparative Anatomy. In this subject two courses are offered, each rated as a Minor.

Course A is open to graduate students who took only course (3) among their undergraduate studies. It consists of undergraduate courses (4), (5), and (6), which may be taken together in one year, but are preferably spread over two. *Professor Campbell*.

Course B is for students who have taken undergraduate courses (3), (4), and (5). It is an extension of course (6), the extension consisting in two extra hours of laboratory work weekly, and considerable parallel reading in accordance with a definite syllabus. *Professor Campbell*.

BOTANY.

A minor course in the Fungi. Basis: undergraduate course 6. Extension as follows: (a) Three hours per week additional laboratory work. In this the student should become familiar with as much of the general technique as is laid down in the manuals.

(b) Careful study of papers by Atkinson, Brefeld, Clinton, Salmon, Smith, Stevens, Blackman, Christman, Olive, Klebahn. *Professor Reade*.

CIVIL ENGINEERING.

Baker's Masonry Construction. Irrigation, based on Wilson, Newell. Land Drainage, Elliott, and United States Irrigation Papers. Reinforced Concrete, Turneaure, Taylor and Thompson. Hydraulics, Russell, Merriman. Lectures. Various essays and designs are required of the students.

Six hours per week. Major. Professor Strahan.

AGRONOMY.

1. Soil Types of Georgia.

- (a) A general study of soil formation based on Soils, by Hilgard; Rock, Rock Weathering and Soils, by Merrill; Origin and Nature of Soil, by Shaler; and Disintegration of Georgia Granitic Rocks, by Watson.
- (b) A laboratory study of the physical properties of at least two soils from the Appalachian valley, two from the Piedmont, and two from the coastal plain, with a comparative study of geological and soil areas. King's Agricultural Physics will be used as a basis for this work, and Stevenson's and Schaub's Laboratory Guides will be used as an outline for laboratory work. Soil surveys of the state made by the Bureau of Soils and geological maps will be used as the basis of a comparative study.
- (c) A pot test to determine the influence of lime and organic matter on crop production with the six soils noted above.

Three conferences per week and at least three laboratory periods. Major. *Professor Fain*.

2. Improvement of Seed Corn.

An extension of the work of Agronomy 7 with additional work in the field. The work will include a review of the Experiment Station literature on the improvement of corn, the Book of Corn, edited by Myrick; Corn Plants, by Sargent; Examining and Grading Grain, by Lyon and Montgomery; and Farm Seeds, part VI, of Agricultural Botany, by Percival.

Students will be expected to make seed selections, germination tests, and review all the plat records on corn.

Two conferences per week and at least two laboratory periods. Minor. *Professor Fain*.

3. Physical Properties of Soils.—An extension of undergraduate courses 6 and 7, based on King's Agricultural Physics, Lyon and Fippins's Soil Management, Hilgard's Soils, and Shaler's Formation

of Soils. In addition to the laboratory and text work, field examination of the principal soil types in the Piedmont region and coastal plains of Georgia.

Two conferences per week. Minor. Professor Fain.

4. Fertilizers.—A study of the methods of field experiments, together with the use and effect of commercial fertilizer, with especial reference to nitrogen. The course is based on Hopkins's Soil Fertility, Hall's Report of the Rothamsted Experiment Station, and the published field work of the Experiment Stations of this country. Field work will be carried on in different parts of the state of Georgia for data on the effect of varying amounts of nitrogen on crop production.

Two conferences per week. Minor. Professor Fain.

Note: Courses 3 and 4 may be taken together as a major course.

COTTON INDUSTRY.

- 1. Cytological Aspects of Plant Breeding. This course will be based on Flatter's "Methods in Microscopical Research" and Wilson's "Cell in Development and Inheritance," and is designed to fit the student for investigation work in the fundamental principles of breeding. The laboratory material will consist largely of cotton blooms, although other flowers will be used where it will prove beneficial to the student. Cannon and Balls will be followed in the technique of the study of the cotton bloom, while the student will be required to use as parallel reading Weismann's "Germinal Selection," Darwin and Spencer's "Pangenesis Theory," and much of the more recent literature on the theory of cell development. Three periods of two hours each of laboratory work and one lecture per week. Minor. Professor DeLoach.
- 2. Experimental Plant Breeding. This course will be based on "Mendel's Principles of Heredity" by Bateson, Darwin's "Plants and Animals under Domestication" with special reference to the chapters on plants under domestication, and DeVries's "Mutation Theory," two volumes. Readings from Kellog's "Darwinism To-day," Osborn's "From the Greeks to Darwin," and Brooks's "The Foundations of Zoölogy," will be required. The student will also be required to do experimental work in cotton breeding. Three hours per week. Minor. Professor DeLoach.

Courses 1 and 2 taken together constitute a major. The student will be required to work out some definite problem in cotton breeding and present a thesis thereon.

AGRICULTURAL CHEMISTRY.

1. Agricultural Chemical Analysis. This course will be based on the work offered Seniors and will be limited to the type soils of

the state. Analyses will be made of at least five types as unlike as can be obtained, and a special study will be made of the nature and character of the organic matter contained. The geological formation in the localities in which these soils are found will be studied.

Work will be done towards improving a few of the methods by which it is now difficult to duplicate results, such as that for determining humus.

Parallel reading and an acquaintance with work being carried on in other laboratories will be required. This reading will be Stockbridge's Rocks and Soils, Hopkins's Fertility, Hall's Soils, Hilgard's Soils, and the Bulletins bearing on the subject.

Wiley's Principles and Practice of Agricultural Analysis, Vol. I, and Bulletin No. 107, Official and Provisional Methods of Analysis, will be used as reference books.

Three conference hours and six laboratory periods per week. Major. Professor Worsham.

2. An extension of agricultural chemistry 4, for students who have had agricultural chemistry 4, and wish to pursue the work exclusively with soils, fertilizers, or food and feed stuffs. This will be left partially optional with the student. Students working with soils will be required to make three complete analyses of soils. Those working with fertilizers will be required to make an analysis of fifteen complete and ten incomplete fertilizers. Those working with feeds and foods will be required to make twenty-five analyses.

The same reference books as are used in course 1, with the addition of Vol. II of Wiley's Principles and Practice of Agricultural Analysis, and Leach's Food Inspection and Analysis, will be used in this course.

Four hours per week. Minor. Professor Worsham.

HORTICULTURE.

1. Junior courses Nos. 4, 5, 6, 7, 8, and 9; with selected reading from the following: The American Fruit Culturist, Thomas; Fruit and Fruit Trees of America, Downing; Plums and Plum Culture, Waugh; Plant Diseases, Duggar; The Small Fruit Culturist, Fuller; Barry's Fruit Garden, Journals, Bulletins, etc.

Four hours per week and laboratory work. Minor. Professor McHatton.

2. Advanced Pomology. This course is open to students who have specialized in Horticulture, and is based upon Bailey's Evolution of our Native Fruits and The Survival of the Unlike.

Selected reading from the following, to be mainly along the lines of origins of varieties of plants and the histories of various fruits: Plant Breeding, Bailey; Species and Varieties: Their Origin and Mutation, DeVries; Animals and Plants Under Domestication, Dar-

win; Origin of Species, Darwin; Heredity, Thompson; Mendelism, Punnet; Fruits and Fruit Trees of America, Downing; American Fruits and Their Culture, Hume; The Grapes of New York, Hedrick; Foundations of American Grape Culture, Munson; The Apples of New York, Beach; Journals, Bulletins, etc.

Two conference hours per week, and two laboratory periods. Minor. *Professor McHatton*.

3. Advanced Pomology, Course 2, with the addition of a *thesis* on some horticultural subject. This thesis is to call for not less than three laboratory periods per week and is to consist of research work to be chosen by the student with the assistance of the instructor. Major. *Professor McHatton*.

In 1912-1913 courses 2-3 consisted of a study of the origin, history, botany, culture, variability, and adaptability, of the apple. Thesis: Varieties of apples adapted to the soils and climate of Georgia.

ANIMAL HUSBANDRY.

1. Investigations of feeding problems, based on feeding tests covering periods of from 90 to 180 days, with a sufficient number of animals to give reliable results. Accurate and detailed records of kinds and amounts of feed will be kept, together with records of production. In addition a thorough study will be made of the chemical and physiological changes, reactions and processes involved in animal life, such as assimilation, disassimilation, mastication, digestion, absorption, respiration, circulation, secretion, and reproduction.

Parallel reading: Lusk's Elements and Science of Nutrition; Armsby's Principles of Animal Nutrition; Hervy's Feeds and Feeding. Prerequisite: undergraduate courses 6 and 7.

Two lectures a week. Minor. Professor Jarnagin.

2. Based on undergraduate course 12. The student will be required to conduct a feeding experiment of sixty days with three groups of pigs. Group 1 is to receive no cotton seed meal. Group 2 is to receive a sufficient amount of protein in the form of cotton seed meal to make a balanced ration. Group 3 is to receive all the cotton seed meal it will consume.

Parallel reading: Henry's Feeds and Feeding; Dietvich's Swine; Experiment Station Bulletins; Report of Bureau of Animal Industry. Two conferences a week. Minor. *Professor Jarnagin*.

VETERINARY MEDICINE.

The course consists of work in the Theory and Practice of Veterinary Medicine, including attendance upon clinics, and lectures

and laboratory work in Bacteriology. It is based on undergraduate courses 5 and 6, and the student must have taken courses 1, 2, 3, and 4, or work of equal value in some other institution. Special attention is paid to the study of pathogenic bacteria, and particularly to those varieties that are the causative agents of diseases in animals. The course in Theory and Practice consists of lectures and clinical demonstrations. Students are required to attend clinics, diagnose, prescribe for, and prepare and administer medicines and treatment to clinic cases,

Texts: Law's Veterinary Medicine; Jordan's General Bacteriology; McFarland's Pathogenic Bacteria.

Two conferences and two laboratory periods a week. Minor. Professor Burson.

EXPENSES.

Residents of Georgia pay no tuition fees. Students who are residents of other states pay a tuition fee of \$50.00 per annum. The following estimate of expenses for a student rooming in a dormitory and boarding at Denmark Hall includes all necessary items except clothing and railway fare:

Matriculation fee (paid on entrance)\$	10.00
Library fee (paid on entrance)	5.00
Board (monthly, in advance, \$20.00)	180.00
Furnishing room in dormitory (estimated)	14.00
Laundry (estimated at \$1.50 per month)	13.50
Room rent, lights and attendance, (\$2.50 per month)	22.50
Fuel (estimated)	10.00
Books and stationery (estimated)	20.00

\$275.00

For laboratory fees in Chemistry, Zoölogy, Physiology, Botany, and Physics, see p. 46.

GRADUATE COURSES IN THE SUMMER SCHOOL.

The University will permit a graduate student, eligible to candidacy for a second degree, to secure the Master's degree upon the successful completion of graduate courses pursued during not less than three Summer Sessions. During the periods intervening between the Summer Sessions (and, if necessary, for the year following the third Summer Session), the candidate must continue his studies under the direction of the professors in charge of his several courses. In the case of each course thus given the professor will submit to the Committee on Graduate Courses for their approval a definite

statement of the work to be done by lectures and conferences and that to be done by the candidate *in absentia*. And this apportionment must be approved by the University Faculty.

A thesis is required by the Faculty in connection with each Major course offered in the Summer School.

The University does not undertake to provide graduate courses in the Summer School, such provision being in the hands of the Board of Directors of the Summer School. But the University guarantees the quality of such graduate courses as are given.

Full particulars of the Summer School courses will be found in the special Bulletins of the Summer School.

Graduate Courses

Summer of 1913

PROFESSOR HOOPER.

- 1. Cicero, de Finibus Bonorum et Malorum.
- 2. Cicero, de Officiis.
- 3. Twelve exercises (one each month) in translating English into Latin.

A Minor course. Prerequisite courses: Latin 1, 2, 3, 4, or equivalents.

HISTORY OF THE ENGLISH DRAMA TO THE END OF THE ELIZABETHAN PERIOD.

Professor Park.

A general survey will be made of the intellectual, social, and political life of the English people from the 12th to the 16th centuries.

Speciments of the early English Religious Drama, the Morality Play, and the Interlude, will be read and studied. Selected plays of Heywood, Lyly, Marlowe, Greene, Peele, Shakespeare, Jonson, Webster, Beaumont and Fletcher, Middleton, Massinger, and others will be studied as to their sources, dramatic technique, and literary worth.

During the summer, in addition to daily lectures, the student will be required to read works not usually accessible in localities of meagre library facilities. Throughout the year regular reports will be required on the outlined course of study.

The course will be based upon:

Traill's Social England.

Green's History of the English People.

Jusserand's English Wayfaring Life, 14th Century.

Ward's History of English Dramatic Literature.

Bates's The Early English Religious Drama.

Schelling's Elizabethan Drama.

Symonds's Shakespeare's Predecessors in the English Drama.

Manly's Specimens of the Pre-Shakespearean Drama.

The Mermaid, Everyman, and "Belles Lettres" editions of the English Dramatists.

In 1913 that part of this course will be given which will complete a Major for those who took it in 1911 and 1912, and will complete a Minor for those who began it in 1912.

Another course in the English Drama will be given by Professor Park in 1913, which, with the work of the following year, will constitute one-third of a Major course in English Literature, and which can also be so supplemented as to constitute a Minor.

THE HISTORY OF THE SOUTH.

Associate Professor Brooks.

The course outlined below is a combination of the ordinary lecture course with seminar work. The lectures will present in broad outline the current of southern political and economic history. The seminar work is designed to familiarize the student with the important sources of southern history, so far as the University library facilities permit; to enable him to get a more intimate knowledge of certain phases of the subject than can be given in the lectures; and to afford practice in historical investigation. There will be four lecture hours and two seminar hours per week. At the seminar meetings papers on assigned topics will be read by members of the class. Students should have had at least two years of college history before undertaking this course.

As there are no books covering the history of the South as a whole, and as it is not desirable to require students to purchase a large number of books, the following plan has been arranged for study between summer sessions. The history of the South has been divided into six periods, and for each period three standard works are listed. Each student will select one period and be required to prepare for examination in the books listed in that group. A list of the periods with texts is given below.

This course is rated as one-third of a Major. The course as outlined, with two periods studied, may be counted as a Minor.

The subjects of the twenty lectures, with the principal authorities to be used by students in the preparation of topics, follow:

Lecture I: Physiography.

Authorities:

Semple, E. C., American History and its Geographical Conditions. Brigham, Geographical Influences in American History.

Shaler, N. S., in Winsor: Narrative and Critical History, IV, Introd., Part I.

Shaler, N. S., United States, I, chap. II.

Whitney, J. D., in Enc. Brit. 9th ed., United States, pp. 791-817.

Farrand, L., Basis of American History, chap. I.

Census 1880, Cotton Production (Soils).

Lecture II: The Aborigines of the South.

Authorities: Bourne, E. G., DeSoto.

Adair, James, History of the American Indians.

Bartram, William, Travels.

Hawkins, Benj., Creek Country in 1789.

Jones, C. C., Antiquities of the Southern Indians.

Pickett, A. J., History of Alabama.

Lectures III and IV: Settlement.

Authorities: Lowery, Spanish Settlements in the United States, I, chaps. VIII-X.

Bourne, E. G., Spain in America, chap. III.

Thwaites, R. G., French in America, chap. V.

Channing, E., Jeffersonian System, chap. IV.

Eggleston, E., Beginners of a Nation, Book I, chaps. II-III.

Fiske, John, Old Virginia and her Neighbors, I, chaps. II, III, V, VIII, IX, vol. II, chap. XV.

Hart, American History Told by Contemporaries, I, chaps. X, XI, XIII, and pp. 200, 206.

Bruce, P. A., Institutional History of Virginia in the Seventeenth Century, I, pp. 62-109, II, pp. 226-254.

MacDonald, Wm., Documentary Source Book, (for Charters).

Doyle, J. A., Colonies under the House of Hanover (Georgia).

Lectures V and VI: Economic and Social History of Colonies.

Authorities: Bruce, P. A., Economic History of Virginia in the Seventeenth Century, I, pp. 3-45, II, 133-160 (Planters' homes).

Fiske, Old Virginia, II, chap. X (Comparison of Virginia and New England as to social origins; I, chaps. VI and VII (Tide-water Virginia).

Hrrt, Contemporaries, III, 49, seq., (Description of a tobacco plantation). I, chap. XIII (Tobacco).

Phillips, U. B., Plantation and Frontier Documents, I, pp. 186-188 (Plantation industry), 245-6 (Plantation houses); 301, seq. (The river traffic).

McGrady, South Carolina under the Proprietors and the Crown (Rice industry).

Leigh, F. B., Ten Years on a Georgia Plantation, app. (Rice).

Phillips, U. B., Archives of Georgia, 445-446 (Rice).

Bruce, Economic History, I, chap. VIII (Indented servants).

Phillips, Plantation and Frontier Docs., I, pp. 339-375 (Indented servants).

Stevens, W. B., History of Georgia, I, Book II, chap. VIII (Land tenure in Georgia). IX (Slavery in Georgia).

Bruce, Economic History (Beginning of slavery).

Phillips, Plantation and Frontier, II, 29-30, 33, 44-45, 51, seq. (Slavery).

Fiske, Old Virginia, II, chap. XV (Slavery in Carolinas).

Lectures VII and VIII: Expansion of the South, 1790-1830.

Authorities: Fiske, Old Virginia, II, 390, seq. (The Scotch-Irish).

Shaler, N. S. Kentucky, chaps. V-VII (Boone).

McLaughlin, A. C., Confederation and Constitution, pp. 131-135 (Robertson and Sevier in Tennessee).

Hosmer, J. K., Louisiana Purchase.

Smith, G. G., History of Georgia, pp. 169-177 (Yazoo fraud).

Brown, W. G., History of Alabama, chaps. X, XI, XV, XVI.

Babcock, K. C., Rise of American Nationality, chap. XVII (Acquisition of Florida).

MacDonald, Documents, for treaty with Spain and other documents.

Lecture IX: Economic Aspects of the Expansion.

Authorities: Turner, F. J., Rise of the New West, 1820-1830, chap. IV, (Exhaustion of lands in older south).

Brown, W. G., Lower South in American History, chap. I.

Phillips, U. B., Origin and Growth of Southern Black Belts.

Hammond, M. B., The Cotton Industry, chaps. I and II (Rise of cotton industry and history to 1860).

Phillips, Plantation and Frontier Docs., II, pp. 196, 201-219, 185, seq., 196 (Magrations of planters with slaves, and of poor whites).

Census Reports (Growth of slavery).

Weeks, S. B., Anti-slavery Sentiment in the South.

Lectures X and XI: Politics, 1789-1833.

Authorities: McLaughlin, Confederation and Constitution, chaps. XVII and XVIII, Origin of political parties in U. S.).

Channing, E., Jeffersonian System, chap. II. (Jefferson's administration).

MacDonald, W., Jacksonian Democracy, chaps. II, III, IV, XVIII (Election of Andrew Jackson; personal traits). chaps. V, VI, IX (Tariff and the Nullification movement).

Lodge, H. C., Webster, chap. VI (Hayne-Webster debate).

Von Holst, E., Calhoun, chap. IV (Nullification).

Ames, H. V., State Documents on Federal Relations, and

MacDonald's Documents ((Attitude and resolutions of Southern States on Nullification).

Lecture XII: Slavery as an Economic and Social Institution, 1830-1860.

Authorities: Phillips, U. B., Plantation and Frontier (Use Index, Documents on plantation management, routine labor, rice plantations, cotton plantations, slave trade, poor whites, slave conspiracies, etc., etc.

Phillips, U. B., Economic Cost of Slaveholding.

Contemporary opinions of northern, European and southern observers, such as Sir Charles Lyell, F. L. Olmsted, J. Q. Mallard, H. R. Helper, S. D. Smedes, N. H. Adams, Frances Kemble.

Hart, A. B., Slavery and Abolition (Effect on society).

Lecture XIII: Political Struggle over Extension of Slavery.

Authorities: Turner, F. J., Rise of the New West, chaps. IX and X (Missouri Compromise).

Garrison, G. P., Westward Extension, chaps. VI-X (The Texas question).

Phillips, Plantation and Frontier, II, 251-257 (Immigration to Texas).

MacDonald's Documents (Documents relating to Texas).

Rhodes, J. F., History of the United States (Index).

(Compromise of 1850, Kansas-Nebraska Bill, Dred Scot Decision, Lincoln-Douglas Debates).

Hart, Contemporaries.

MacDonald, Documents (Original documents bearing on Compromise of 1850, Kansas-Nebraska struggle, etc.).

Lecture XIV: Secession.

Authorities: Stephens, A. H., War Between the States, I, pp. 21, 23, 31, 495-527.

Davis, Jefferson, Rise and Fall of the Confederacy, I, 60-202.

Chadwick, F. E., Causes of the Civil War, chaps., VIII, IX.

Smith, Parties and Slavery, chap. XX.

Pollard, A. E., The Lost Cause, chap. V.

Trent, Southern Statesmen of the Old Regime (Chaps. on Calhoun, Stephens, Toombs, Davis).

Phillips, Georgia and State Rights, chap. VIII.

Brown, Lower South in American History, chap. II.

Reed, Jno. C., Brothers' War, Chaps. on Calhoun, Toombs, Davis. Munford, B. B., Virginia's Attitude Towards Slavery and Secession, Part IV.

Lecture XV: South on the Eve of War.

Authorities: Ingle, Southern Side Lights (app., Resources of North and South compared in tabular form).

Brown, Lower South, Chap. III.

Phillips, U. B., History of Transportation, chap. IX.

Chadwick, Causes of Civil War, chap. II.

Smith, Parties and Slavery, chap. V (Railroad building, 1850-1860).

U. S. Census Publications (Data on agriculture, manufacturing, commerce, population, etc.).

Lecture XVI: The Confederacy.

Authorities: Curry, J. L. M., Civil History of the Confederate States, chaps. II, III (App., constitutions of Federal Union and Confederacy compared in parallel colmuns).

Stephens, A. H., War Between the States, I, chap. XIX.

Schwab, J. C., Confederate States of America (Financial and industrial aspects).

Smith, E. A., History of the Confederate Treasury.

Callahan, J. M., Diplomatic History of the Confederacy.

Reagan, J. H., Postal Service of the Confederacy, in Sou. Hist. Assn. pubs. July, 1902.

Lecture XVII: Political Reconstruction.

Authorities: Rhodes, J. F., History of the United States, vols. IV-VII.

Dunning, W. A., Reconstruction.

Fleming, W. L., Documentary History of Reconstruction (Theories, Presidential and Congressional reconstruction, documents connected with.)

MacDonald, Documents.

Reynolds, J. S., Reconstruction in South Carolina.

Garner, J. W., Reconstruction in Mississippi.

Fleming, W. L., Reconstruction in Alabama.

Wooley, E. C., Reconstruction in Georgia.

Herbert, H. A., Noted Men on the Solid South (Sketches of reconstruction in every Southern State).

Pierce, P. S., The Freedmen's Bureau.

Lecture XVIII: Economic and Social Reconstruction.

Authorities: Fleming, W. L., Documentary History of Reconstruction (Documents on labor troubles, black codes, Union League, Ku Klux, Freedmen's Bureau activities).

Annual Cyclopedia, 1865-1872.

Accounts of travellers, newspaper correspondents, government emissaries, Southern diarists, etc., such as

Andrews, S., South Since the War.

Russell, W. H., My Diary North and South.

Campbell, Sir G., White and Black.

King, E., The Great South.

Reports of Carl Schurz and General Grant.

Andrews, E. F., Wartime Journal of a Georgia Girl.

Pryor, Mrs. R. A., My Day.

Smedes, S. D., Memorials of a Southern Planter.

Brown, Lower South, chap. IV (Ku Klux).

Congressional Docs., 42 Cong. 2nd sess., Reports of Committees on Ku Klux.

Monographs listed in preceding lecture (chaps. on economic aspects of Reconstruction).

Lecture XIX: The Negro Problem.

Authorities: Stone, A. H., Studies in the American Race Problem.

Hoffman, F. L., Race Traits and Tendencies of the American Negro. Murphey, E. G., Basis of Ascendency.

Reed, J. C., Brothers' War, chaps. XVI and XVII.

Census 1900 and 1910, Negro in the United States.

Kelsey, Carl, The Negro Farmer.

DuBois, W. E. B., Negro Landowner of Georgia.

Studies of conditions among negroes published by the Department of Labor, Atlanta University, &c.

Lecture XX: Recovery of the South, 1870-1910.

Authorities: Census Reports. A statistical study, comparing the condition of the South in 1870 and in 1910.

PERIODS OF SOUTHERN HISTORY.

Period I: Colonial.

Fiske, John, Old Virginia and her Neighbors, 2v., (Houghton, Mifflin & Co., 1897).

Eggleston, Edward, Beginners of a Nation (Appleton & Co., 1899).

Bruce, P. A., Economic History of Virginia, 2v. (Macmillan Co., 1896).

Period II: The Cotton South.

Burgess, J. W., Middle Period (Scribners, 1901).

Turner, F. J., Rise of the New West (Harpers, 1906).

Brown, W. G., Lower South in American History (Macmillan Company, 1902).

Period III: Georgia History in the 19th Century.

Phillips, U. B., Georgia and State Rights (Government Printing Office, 1902).

Wooley, E. C., Reconstruction in Georgia (Columbia Univ. Pub., 1901).

Banks, M. M., Economics of Land Tenure in Georgia (Columbia Univ. Pub., 1905).

Period IV: Ante-bellum Economic History.

Hammond, M. B., The Cotton Industry (Publications of American Economic Assn., 1897).

Ingle, Edward, Southern Sidelights (T. Y. Crowell & Co., 1896). Hart, A. B., Slavery and Abolition (Harpers, 1906).

Phillips, U. B., Economic Cost of Slaveholding (Polit. Sc. Quar., XX, No. 2).

Period V: The Confederacy.

- Curry, J. L. M., Civil History of the Confederate States (B. F. Johnson Pub. Co., 1901).
- Schwab, J. C., Confederate States, Industrial and Financial History (Scribners, 1901).
- Callahan, J. M., Diplomatic History of the Confederacy (Johns Hopkins Univ. Pubs., 1901).

Period VI: Reconstruction.

- Dunning, W. A., Reconstruction, Political and Economic (Harpers, 1906).
- Burgess, J. W., Reconstruction and the Constitution (Scribners, 1901).
- Monograph on reconstruction in some one southern State, to be chosen by the student. See list given under Lecture XVII.
- All students will be required to purchase MacDonald, Wm., Documentary Souce Book, 1606-1900 (Macmillan).

PRINCIPLES OF EDUCATION.

Professor Geissler.

The main object of this course is to study the principles underlying mental and physical development, with especial emphasis upon their educational significance. The lectures will cover the following topics:

- Laws of physical growth and experimental methods of investigating them.
- Psychological characteristics of the four developmental stages: Infancy, Childhood, Puberty, and Post-adolescence.
- Study of special treatment of retarded and feeble-minded children.

The following parallel reading will be required as class-work:

Kirkpatrick, Fundamentals of Child Study, Chapters 1, 2, 3, 5, 14, 15, 16, 17, and 18.

Hall, Youth, it Education, Regimen, and Hygiene, Chapters 1, 2, 6, 7, 8, 9, 10, and 12.

Whipple, Manual of Mental and Physical Tests, Chapters 4 and 5.

The following books will be assigned for private reading:

Colvin, The Learning Process.

Gulick and Ayres, Medical Inspection of Schools, and

Kirkpatrick, Genetic Psychology.

This course will be one of three successive courses constituting a Major, or of two successive courses constituting a Minor in the general subject of Principles of Education.

Five hours per week. Prerequisites: General Psychology (Philos. 1-2, or equivalent) and Educational Psychology (Educ. 3, or equivalent).

ZOOLOGY.

PROFESSOR CAMPBELL.

This course is open to students who have had at least one year of undergraduate Zoölogy in a college of approved standing. It is rated as a Minor, and may be completed in two summers with a considerable amount of private study during the intervening winter.

The summer of 1912 was devoted to a study of the classes and orders of the Vertebrates. This was based primarily upon work in Museum and Laboratory in which special attention was given to the external anatomy and osteology. This was supplemented by lectures, profusely illustrated by lantern slides, and additional reading.

The work assigned for the winter of 1912-1913 was a part of Kingsley's Comparative Anatomy of Vertebrates, and a general work, Locy's "Biology and its Makers."

In 1913 the work will consist of Vertebrate dissection, and Vertebrate Histology, and the class-room work will be designed to correlate all the previous work, and complete the subjects begun.

One or more additional courses may be given in the summer of 1913, according to the demand. Applications for other courses, either for 1913 or later sessions, and requests for information concerning graduate work, should be addressed to W. H. Bocock, Dean of the Graduate School.

GRADUATE STUDENTS

Allen, Reuben WinfieldThomaston. A.B., University of Georgia, 1911. Fellow in Chemistry. Chemistry, German.
Childs, Ross RenfroeAthens. B.S. Agr., University of Georgia, 1912. Tutor in Agronomy. Agronomy, Cotton Industry, Agricultural Chemistry.
Hollingshead, Robert SullivanAthens. A.B., Cornell University, 1910. Adjunct Professor of Soil Chemistry. Agronomy, Agricultural Chemistry.
Hunnicutt, Benjamin HarrisLavras, Minas Geraes, Brazil. B. S. Agr., Mississippi Agricultural and Mechanical College, 1905. Cotton Industry, Agronomy, Animal Husbandry.
Kiger, Claude MertonAthens. B. S. Agr., Purdue University, 1912. Tutor in Horticulture. Horticulture, Agronomy, Botany.
Leard, Emil WatsonHartwell. A.B., Mercer University, 1910. History.
Lucas, Walter Malry*Waverly Hall. B.S. in C.E., University of Georgia, 1912. Engineering.
Miller, Eralbert TalmadgeAthens. B.S. in C.E., University of Georgia, 1910. Instructor in Physics. Physics.
Moore, Henry WalterAthens. B.S., Clemson College, 1907. Agronomy, Veterinary Medicine, Animal Husbandry.
Newbern, Jefferson LamarBroxton. A.B., Meridian College, 1910. History.
Newsom, Charles HendersonEatonton. A.B., University of Georgia, 1912. History.
Peacock, Howell BenajahAthens. B.S., University of Georgia, 1911. Instructor in Physical Education. Psychology, History, English Literature.
Sell, Edward Scott

^{*}Not a candidate for a degree.

Stone, Charles HolmesAthens.		
B.S., University of Georgia, 1912. Student Assistant in Physics. English Literature, Roman Drama, History.		
Woofter, Thomas Jackson, Jr.*Athens.		
A.B., University of Georgia, 1912. Phelps-Stokes Fellow, studying under the guidance of Professor R. P. Brooks.		
STUDENTS PURSUING A COURSE OF GRADUATE STUDY COVER-		
ING A TERM OF YEARS, INCLUDING A MINIMUM		
OF THREE SUMMER SESSIONS.		
Armstrong, May Ella*Barnesville.		
A.B., Florida Normal College, 1891. Member of the Faculty, Gordon Institute, 1903—. Education.		
Arnold, Elijah SingletonOloh, Miss.		
A.B., Meridian College, 1910. Education, English Literature.		
Avery, Ora Hart*Athens.		
Graduate, Lucy Cobb Institute, 1903. Graduate student, L. C. I., 1911-1912. Member of the Faculty, L. C. I. English Literature.		
Blackman, Neill RobertPlains.		
B.S., University of North Carolina, 1901. History, Education, Biology.		
Brock, John James A. B. Marson Visingwitz 1911		
A.B., Mercer University, 1911. Education, Biology.		
Caldwell, Elizabeth Kinloch*Athens.		
Member of the Faculty, Athens High School. English Literature.		
Carlton, Wellborn ChaudoinAuburn.		
A.B., Mercer University, 1903. Education, English Literature.		
Ginn, Candler MarionRoyston.		
Applicant for degree of B.S., University of Georgia; undergraduate work to be completed in 1912. Education, English Literature.		
Harrison, Emily*Rome.		

Radcliffe College; University of Chicago; University of West Virginia; Sorbonne; University of Paris. Member of the Faculty, Shorter College.

English Literature, Education.

^{*}Not a candidate for a degree.

26

UNIVERSITY OF GEORGIA.

Lewis, Mamie RebeccaMacon. A.B. (Graduate Courses), Salem Female College, 1895. History, Education, English Literature.		
Lyndon, Mary DorothyAthens. A.B., Wesleyan Female College, 1895. Graduate student, W. F. C., 1895-1897. English Literature, History, Education.		
Mershon, James AustinGainesville. A.B., Emory College, 1900. Education, English Literature.		
Nelson, Henry ElbertSpring Place. B.S., North Georgia Agricultural College, 1911. Education, English Literature.		
Newbern, Jefferson LamarBroxton. A.B., Meridian College, 1910. History, English Literature, Education.		
Newsom, Charles HendersonEatonton. A.B., University of Georgia, 1912. English Literature, Education, History.		
Nussman, GeorgeAtlanta. Graduate, Evangelische Proseminar, Elmhurst, Ill., 1894. Eden Theological Seminary, 1894-1897. B.D., Yale University, 1905. Graduate student, Western Theological Seminary, 1906-1907. Education.		
Sewell, Wilbur StuartRockmart. A.B., Emory College, 1907. English Literature, Education, Latin.		
Usher, George EphraimJefferson. A.B., University of Georgia, 1900. English Literature, Education, Latin.		
SUMMARY.		
Candidates for the degree of Master of Arts 16		
Candidates for the degree of Master of Science 1 Candidates for the degree of Master of Science in Agriculture 6		
Candidates for the degree of Master of Science in Agriculture 1		
Not candidates for a degree 7		
Total31		









6

-